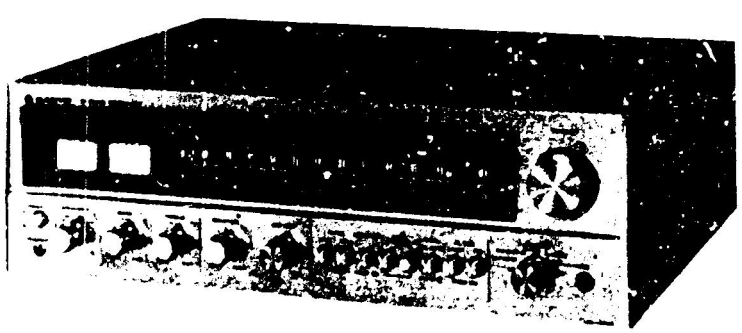
SANYO

# SANYO
# STEREO RECEIVER
# DCX 8000K
# SERVICE MANUAL



## SPECIFICATIONS

**GENERAL**

| | |
|---|---|
| IC | |
| Transistors | 2SC693 X 3, 2SA726 X 4<br>2SA649 X 1, 2SC536 X 8<br>2SC1313 X 10, 2SB511 X 1<br>2SC674 X 1, 2SA659 X 1<br>2SD325 X 2, 2SC929 X 1<br>2SC875 X 2,<br>2SC1175 X 3<br>2SA532 X 1<br>2SD323 X 1,<br>2SC930 X 6 |
| Diodes | 1S188 X 9, RD24A-N X 1<br>RD-13A X 1, RD24A-M X 1<br>DS-430 X 4 |
| Silicon rectifiers | S3RC40 X 1, S3RC40R X 1 |
| Power source | AC120, 200, 220, 240V 50/60Hz<br>AC220, 110V 50Hz (in Europe) |
| Power consumption | 210W |
| Dimmension (aprox.) | 455 (W) X 340 (D) X 148 (H) mm<br>17-15/16" X 13-3/8" X 5-7/8" |
| Weight (approx.) | 11.5 kg 25.1 lbs. |

**FM TUNER SECTION**

| | |
|---|---|
| Frequency Range | 88 – 108 MHz |
| IF | 10.7 MHz |
| Aerial Impedance | 300 ohms balanced<br>75 ohms unbalanced |
| 30 dB S/N Sensitivity | 2.0 μV |
| Usable Sensitivity (IHF) | 2.0 μV |
| Capture Ratio | 2.0 dB |
| Image Rejection | 85 dB (98 MHz) |
| IF Rejection | 95 dB (98 MHz) |
| AM Suppression | 50 dB (98 MHz) |
| Signal to Noise Ratio | 70 dB (98 MHz) |
| Harmonic Distortion | Mono: 0.3 % (100 % Mod.)<br>Stereo: 0.5 % (100 % Mod.) |
| Stereo Separation | 40 dB |
| Selectivity (IHF) | 60 dB |

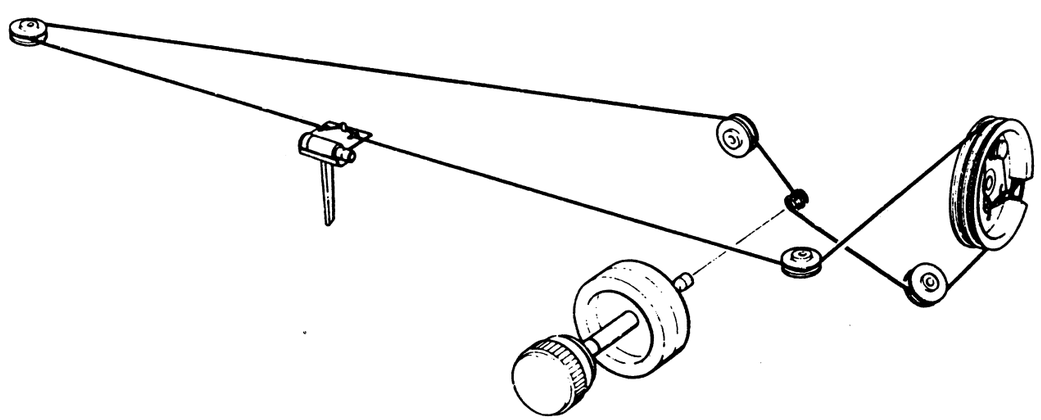
**AM TUNER SECTION**

| | |
|---|---|
| Frequency range | 535 – 1,605 kHz |
| 20 dB S/N Sensitivity | 300 μV/m |
| Usable Sensitivity (IHF) | 250 μV/m |
| Image Rejection | 45 dB |
| IF Rejection | 35 dB |
| Signal to Noise Ratio | 45 dB |
| Selectivity | 25 dB |

**AUDIO AMPLIFIER SECTION**

| | |
|---|---|
| Total music power | 150W |
| Continuous power/chan. | 50/50W each channel drive<br>40/40W both channel drive |
| Total harmonic distortion (50W output power) | 0.5 % |
| Power band width | 10 – 60,000 Hz |
| 1 watt frequency response | 20 – 50,000 Hz |
| Hum and noise | Less than 3mV |
| Input sensitivity & impedance | PHONO 1 2.5mV 50K ohm<br>PHONO 2 2.5mV 50K ohm<br>MIC 2.5mV 50K ohm<br>AUX 180mW 100K ohm |
| Matching speaker impedance | 4 – 16 ohm (8 ohm nominal) |
| Damping factor | 30 at 8 ohm, 1K Hz |
| Loudness control | 100 Hz +10 dB<br>10K Hz +6 dB |
| Low filter | Fc = 70 Hz (12 dB/oct) |
| Audio muting | –20 dB at 1K Hz |
| Pre amplifier output | 500mV |
| Main amp. input sensitivity | 500mV/50K ohm |
| Tape output sencitivity | RCA 180mV<br>DIN 35mV |
| Tape input sencistivity & impedance | RCA 180mV 100K ohm<br>DIN 180mV 100K ohm |
| Signal to noise ratio | PHONO 1 more than 70 dB<br>PHONO 2 more than 70 dB<br>MIC more than 50 dB<br>AUX more than 80 dB |

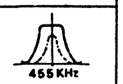
## DIAL CORD STRING





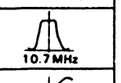
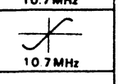
## ADJUSTMENT

### AM ADJUSTMENT

| Step | Adjusting circuit | Connections: Input | Connections: Output | SG. Frequency | Position of tuning dial | Adjustment | V.T.V.M. Oscillosecope |
|---|---|---|---|---|---|---|---|
| 1 | IF | Connect sweep generator to VC7. | Connect oscilloscope to AM OUT (TP 2) | 455 KHz | Near max. capacity of VC. at position with no unrequired signal. | 1st 9-20970<br>AM 2nd 9-21020<br>3rd 9-21030 |  455 KHz |
| 2 | RF | Connect standard loop aerial to output terminal of SG. Place the unit 2 feet from loop aerial. | Connect V.T.V.M. to AM OUT | 600 KHz (400 Hz, 30% modulation) | 600 KHz | AM AERIAL 9-21022<br>AM OSC 9-20740<br>RF COIL 9-20291 | Max. |
| 3 | | | | 1400 KHz (400 Hz, 30% modulation) | 1400 KHz | TC5<br>TC6<br>TC7 | Max. |
| 4 | Repeat adjustments. | | | | | | |

**PREPARE**
1. Variable capacitor completely closed.
2. Set the dial pointer to very left line dial scale.
3. Connect sweep generator. SG, V.T.V.M. and oscillscope.
4. Selector switch to "AM"
5. Use a screwdriver with plastic grip for all adjustments.

### FM ADJUSTMENT

| Step | Adjusting circuit | Connections: Input | Connections: Output | SG. frequency | Position of tuning dial | Adjustment | V.T.V.M. Oscillosecope |
|---|---|---|---|---|---|---|---|
| 1 | IF | Connect sweep generator to test point of the FRONT END through 0.01 μF. | Connect oscilloscope to FRONT END | 10.7 MHz (non modulation) | Near max. capacity ol VC. at f position with no unrequired signal. | IFT of the FRONT END |  10.7MHz |
| 2 | Ratio Det. | | Connect oscilloscope to FM OUT | | | FM DET 9-21000 |  10.7MHz |
| 3 | RF | Connect FM SG. to FM AERIAL terminals. | Connect V.T.V.M. to speaker terminal. | 90 MHz (400 Hz, 30% modulation) | 90 MHz | FM AERIAL COIL<br>FM OSC COIL<br>1st RF COIL<br>2nd RF COIL | Max. |
| 4 | | | | 106 MHz (400 Hz, 30% modulation) | 106 MHz | TC1<br>TC2<br>TC3<br>TC4 | Max. |
| 5 | Repeat adjustments. | | | | | | |

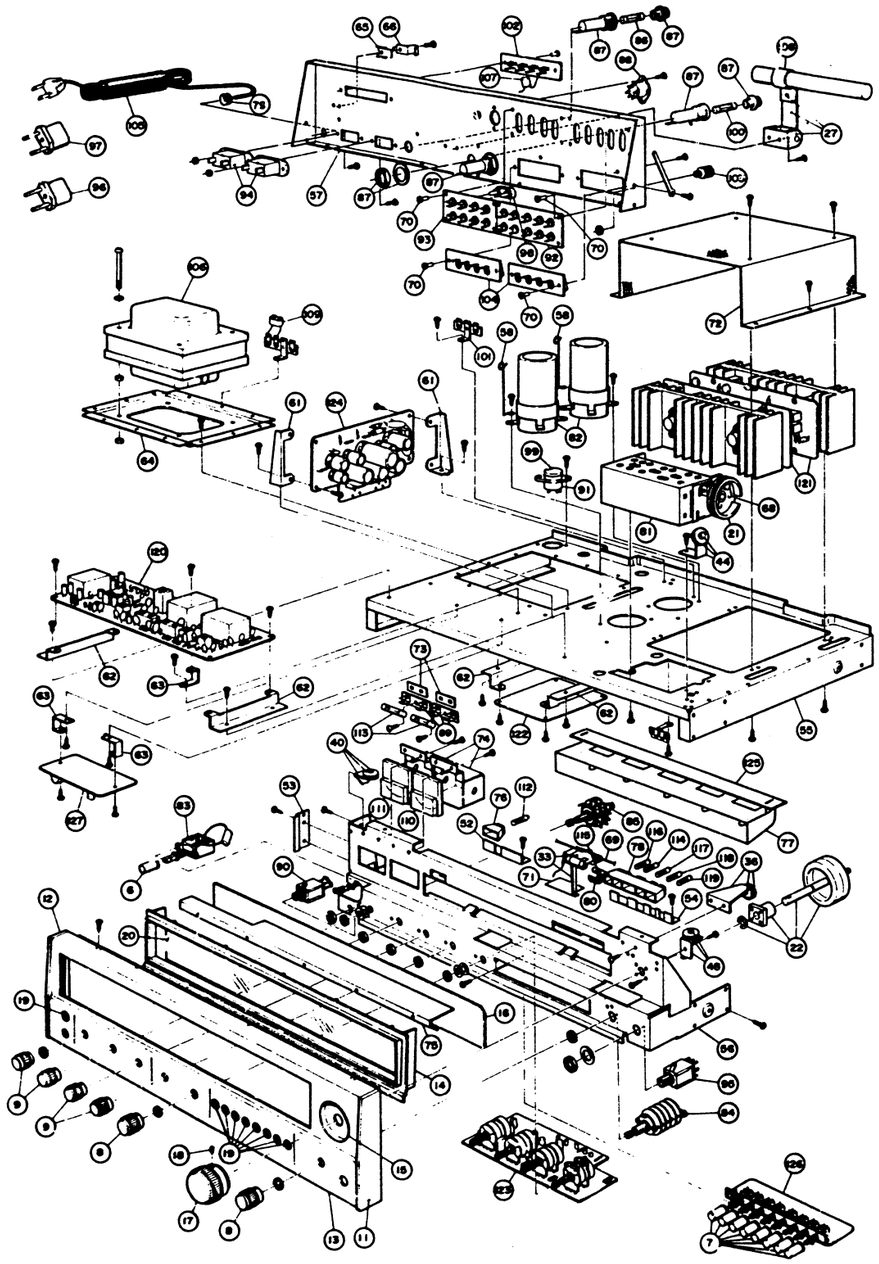
**PREPARE**
1. Variable capacitor completely closed.
2. Set the dial pointer to very left line of dial scale.
3. Connect sweep generator, FM SG, V.T.V.M. and oscilloscope. FM aerial input impedance is 300 ohm.
4. Selector switch to "FM"
5. Use a screwdriver with plastic grip for all adjustments.

### FM MPX ADJUSTMENT

| Step | Adjusting circuit | Connections: Input | Connections: Output | Position of tuning dial | Adjustment | V.T.V.M. |
|---|---|---|---|---|---|---|
| 1 | 19 KHz pilot signal | Connect FM stereo SG. to FM aerial terminals. 19 KHz signal ON. SCA signal OFF. | Connect V.T.V.M. to test point PIN No. 1 of IC (LA3300) | Near max. capacity of VC. at position with no unrequired signal. | 19 KHz<br>9-20210 (Black) | Max. |
| 2 | 38 KHz | Connect FM stereo SG to FM aerial terminals. 19 KHz signal ON Main channel, sub channel signal ON. Add 1000Hz signal from L Ch. | Connect V.T.V.M. to test point PIN No. 13 of IC (LA3300) | | 38 KHz<br>9-20220 (White) | Max. |
| 3 | FM stereo signal separation | | Connect V.T.V.M. to R output | | Separation control<br>VR-1 | Min. |
| 4 | | Connect FM stereo SG to FM aerial terminals. 19 KHz signal ON. Main channel, sub channel signal ON. Add 1000 Hz signal from R Ch. | Connect V.T.V.M. to L output | | 38 KHz<br>(1)Set the pre-set resistor (1 K-Ω) connected to PIN No 5 of IC401 to the minimum position<br>(2)Adjust the pre-set resistor so that sine wave appeared at output becomes clear and minimum | Min. |
| 5 | Repeat steps 3~4. Set at position with max. channel separation. | | | | | |

**PREPARE**
1. Variable capacitor completely closed.
2. Connect FM stereo SG. and V.T.V.M.
3. Selector switch to "FM AUTO"
4. Use a screwdriver with plastic grip for all adjustments

## EXPLODED VIEW

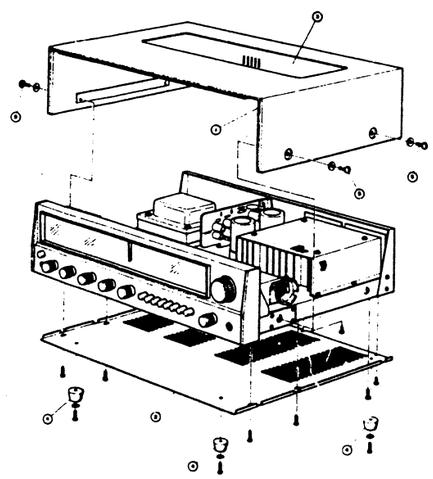




## PARTS LIST

| Key. No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **PACKING** | | | |
| | 4 2449 20230 | Aerial, FM | 1 |
| | 131 6 1139 43003 | Box, Corrugate exp | 1 |
| | 131 6 2119 00850 | Bag, Polyethylen exp | 1 |
| | 131 6 2719 10300 | Bag, Fan | 1 |
| | 131 6 3009 17640 | Pad | 2 |
| | 131 6 4119 33400 | Explanatory booklet (exc. Europe) | 1 |
| | 131 6 4119 33401 | Explanatory booklet (in Eurape) | 1 |
| | 131 6 4159 14700 | Notes | 1 |
| | 131 6 4559 10100 | Manufacturing No | 1 |
| | 131 6 9459 00100 | Rubber band | 2 |
| **CABINET** | | | |
| 1 | 131 2 1101 22501 | Cabinet | 1 |
| 2 | 131 2 1105 14000 | Plate, Bottom | 1 |
| 3 | 131 2 1312 11001 | Grill | 1 |
| 4 | 131 2 1804 10600 | Leg, Rubber | 4 |
| 5 | | Screw, Truss hd. 4x16 | 4 |
| | | Washer, 4.2x14x1.0 | 4 |
| | | Washer, 4.2x10x1.0 | 4 |
| | | Screw, Pan hd. 4x10 | 6 |
| | | Screw, Pan hd. 4x12 | 4 |
| | | Screw, Pan hd tapping 3x6 | 4 |
| **APPEARANCE** | | | |
| 6 | 131 0 1001 23300 | Knob Assy, Power | 1 |
| 7 | 131 0 1001 23400 | Knob Assy, Push | 8 |
| 8 | 131 0 1001 23500 | Knob Assy, Volume, Function | 2 |
| 9 | 131 0 1001 23600 | Knob Assy, SP, Balance, Bass, Treble | 4 |
| | 131 0 1016 16800 | Panel Decorate Assy | 1 |
| 11 | 131 2 1311 32800 | ├ Sash, Right | 1 |
| 12 | 131 2 1311 32801 | ├ Sash, Left | 1 |
| 13 | 131 2 1203 26900 | └ Panel, Control | 1 |
| 14 | 131 2 1116 11700 | Frame | 1 |
| 15 | 131 2 1116 11800 | Frame | 1 |
| 16 | 131 2 1201 23302 | Plate Dial | 1 |
| 17 | 131 2 1601 26400 | Knob, Tuning | 1 |
| 18 | 131 2 4201 12400 | Screw, Tuning Knob | 1 |
| 19 | 131 2 6111 12600 | Bushing | 9 |
| 20 | 131 2 6308 15000 | Filter | 1 |

## EXPLODED VIEW



| Key. No. | | Description | Q'ty |
|---|---|---|---|
| **CHASSIS** | | | |
| 21 | 131 0 3002 10800 | Drum Assy | 1 |
| 22 | 131 0 3003 15400 | Shaft, Dial Assy | 1 |
| 27 | 131 0 3008 11700 | Support, Aerial Assy | 1 |
| 33 | 131 0 3011 13600 | Pointer Assy | 1 |
| 36 | 131 0 3020 02000 | Pully Assy | 1 |
| 40 | 131 0 3020 02300 | Pully Assy | 1 |
| 44 | 131 0 3020 02500 | Pully Assy | 1 |
| 48 | 131 0 3020 02600 | Pully Assy | 1 |
| 52 | 131 2 3101 19700 | Metal Mount, FM Stereo ind. | 1 |
| 53 | 131 2 3101 19900 | Metal Mount, Plate dial | 1 |
| 54 | 131 2 3101 20600 | Metal Mount, Function ind. | 1 |
| 55 | 131 2 3301 18801 | Chassis | 1 |
| 56 | 131 2 3305 16100 | Panel, Front | 1 |
| 57 | 131 2 3306 16001 | Panel, Rear (exc. Europe) | 1 |
| | 131 2 3306 16003 | Panel, Rear (in. Europe) | 1 |
| 58 | 131 2 3608 11200 | Cramp Wire | 2 |
| | 131 2 3608 11700 | Cramp Wire | 10 |
| | 131 2 3608 11701 | Cramp Wire | 10 |
| 61 | 131 2 3614 13300 | Mount, Power P.C.B. | 2 |
| 62 | 131 2 3614 15000 | Mount, IF, P.C.B. EQ P.C.B | 4 |
| 63 | 131 2 3614 15100 | Mount, IF, P.C.B. | 1 |
| 64 | 131 2 3617 12700 | Metal Mount, Trans | 1 |
| 65 | 131 2 3621 00400 | Metal, Cramp Wire | 1 |
| 66 | 131 2 3621 00500 | Metal, Cramp Wire | 1 |
| | 131 2 4106 13100 | Metal Mount, Pulley | 1 |
| 68 | 131 2 4111 00300 | Rope Spring | 1 |
| 69 | 131 2 4112 10200 | Rope 0.5 | 1 |
| 70 | 131 2 4221 00100 | Rivet | 14 |
| 71 | 131 2 5205 12000 | Cushion | 1 |
| 72 | 131 2 6103 13000 | Cover, Shild | 1 |
| 73 | 131 2 6107 13900 | Plate Sever, Metal Lamp Holder | 2 |
| 74 | 131 2 6110 19900 | Shelter Light, Tuning Meter | 2 |
| 75 | 131 2 6110 20000 | Shelter Light, Fram up | 1 |
| 76 | 131 2 6110 20100 | Shelter Light, FM Stereo ind | 1 |
| 77 | 131 2 6110 20900 | Shelter Light, Plate Dial | 1 |
| 78 | 131 2 6110 21000 | Shelter Light, Function ind | 1 |
| 79 | 131 2 6111 11300 | Bushing, Power coad | 1 |
| 80 | 131 2 6308 14200 | Filter, Pilot Lamp | 1 |
| | | Screw, Pan hd. 3x6 | 2 |
| | | Screw, Pan hd. 3x10 | 4 |
| | | Screw, Bind hd 4x10 | 1 |
| | | Screw, Pan hd. Tapping 3x6 | 93 |
| | | Screw, Pan hd. Tapping 3x12 | 8 |
| | | Hex. Not 3mm | 4 |
| | | Hex. Not 4mm | 4 |
| **ELECTRICAL PARTS** | | | |
| 81 | 4 1259 20300 | Front end | 1 |
| 82 | 4 2239 20550 | Electric Capacitor 4700 μF 50V | 2 |
| 83 | 4 2319 23090 | Switch, Push | 1 |
| 84 | 4 2319 23170 | Switch, Rotary, Function | 1 |
| 85 | 4 2319 23180 | Switch, Rotary, Speaker | 1 |
| | 4 2319 21531 | Switch, Slide 6P (in Europe) | 1 |
| 86 | 4 2349 20020 | Fuse 3A, Line Protector (exc. Europe) | 1 |
| | 4 2349 20580 | Fuse 3.15A (in Europe) | 1 |
| 100 | 4 2349 20271 | Fuse 4A, Power Protector (exc Europe) | 2 |
| | 4 2349 20600 | Fuse 5A Slow (in Europe) | 1 |
| 89 | 4 2359 20160 | Fuse Holder | 2 |
| 88 | 4 2359 20190 | Socket, 5P DIN | 1 |
| 87 | 4 2359 20200 | Socket | 3 |
| 90 | 4 2359 21080 | Jack, Headphone | 1 |
| 91 | 4 2359 21220 | Power Select Socket (exc Europe) | 1 |
| 92 | 4 2359 21240 | Socket, Phono 10P | 1 |
| 93 | 4 2359 21260 | Socket, Phono 8P | 1 |
| 94 | 4 2359 21490 | AC Socket (exc. Europe) | 2 |
| | 4 2359 21020 | Socket (in Europe) | 3 |
| 95 | 4 2359 16700 | Jack, Mic | 1 |
| 96 | 4 2369 20260 | Plug, Conversion (exc. Europe) | 1 |
| 97 | 4 2369 20270 | Plug, Conversion (exc. Europe) | 1 |
| 98 | 4 2369 20520 | Plug, Connecter | 2 |
| 99 | 4 2369 20550 | Power Select Plug (exc. Europe) | 1 |
| 128 | 4 2379 20150 | Terminal, Base | 1 |
| 101 | 4 2379 20400 | Terminal Lug 3P | 1 |
| | 4 2379 20490 | Terminal Lug 1–1P | 1 |
| 102 | 4 2379 21050 | Terminal, Aerial | 1 |
| 103 | 4 2379 21060 | Terminal | 1 |
| 104 | 4 2379 21210 | Terminal SP 4P | 2 |

NOTES 1. Part orders must contain Model Number, Part Number and Description.
2. Unless otherwise noted, component parts indicated by perentheses in the comumn Q'ty are not available.
3 Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

## PARTS LIST

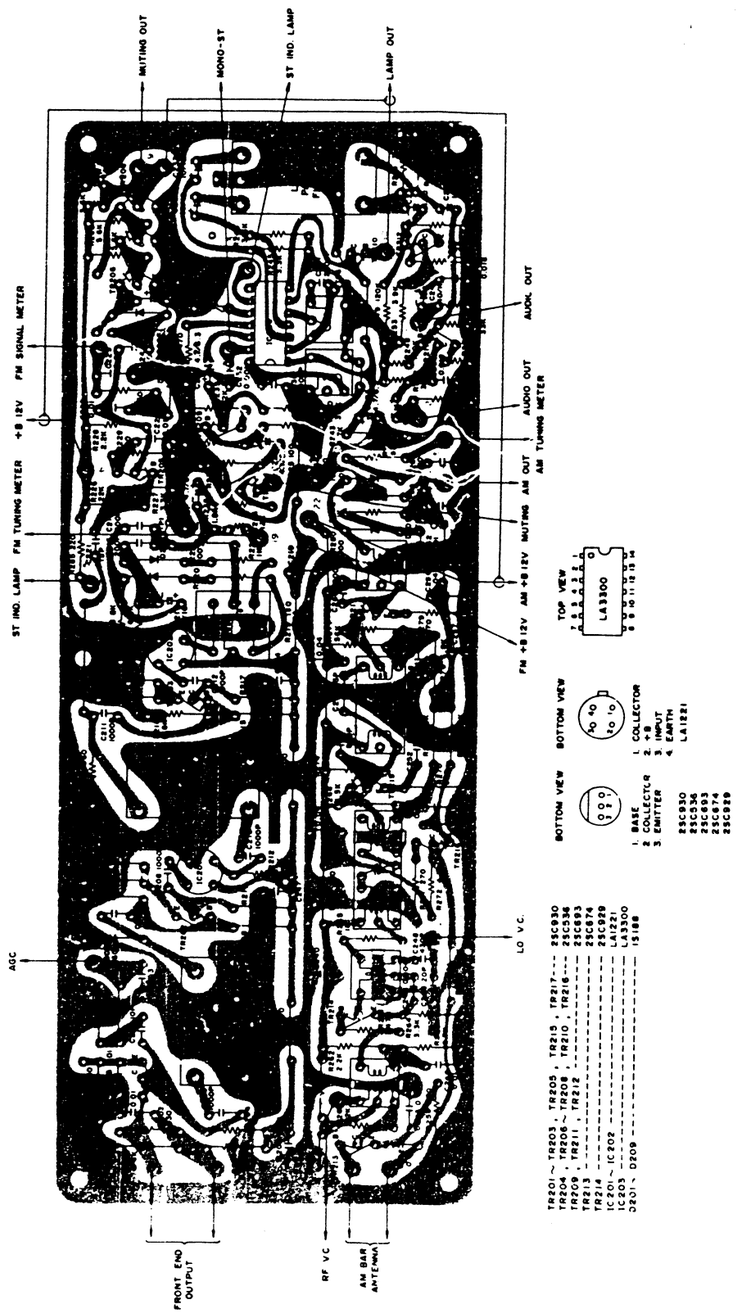
| Key No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **ELECTRICAL PARTS** | | | |
| 105 | 4 2439 20390 | Power Cord (exc. Europe) | 1 |
| | 4 2439 20521 | Power Cord (in Europe) | 1 |
| 106 | 4 2519 22920 | Power Transformer (exc. Europe) | 1 |
| | 4 2519 22921 | Power Transformer (in Europe) | 1 |
| 107 | 4 2539 20121 | IF Trap | 3 |
| 108 | 4 2579 21022 | Bar Aerial AM | 1 |
| 109 | 4 2599 20300 | Balun | 1 |
| 110 | 4 5119 20341 | Meter, Signal (exc. Europe) | 1 |
| | 4 5119 20342 | Meter, Signal (in Europe) | 1 |
| 111 | 4 5119 20350 | Meter, Tuning (exc. Europe) | 1 |
| | 4 5119 20351 | Meter, Tuning (in Europe) | 1 |
| 112 | 4 6129 20147 | Pilot Lamp, 6.3v 25mA | 1 |
| 113 | 4 6129 20260 | Pilot Lamp, Fuse Type | 2 |
| 114 | 4 6129 20302 | Pilot Lamp, Function ind. | 1 |
| 119 | 4 6129 03700 | Pilot Lamp, Function ind. | 1 |
| 116 | 4 6129 20371 | Pilot Lamp, Function ind. | 1 |
| 117 | 4 6129 20372 | Pilot Lamp, Function ind. | 1 |
| 118 | 4 6129 20373 | Pilot Lamp, Function ind. | 1 |
| | 131 0 4006 00100 | Plug, Photex | 1 |
| | | **(CAPACITORS)** | |
| | | PP 0.01 μF 630V 0V ±20% | 1 |
| C904,905, 906,907 | | Ceramic 0.04 μF 50V ±20% | 4 |
| | | **(RESISTORS)** | |
| R905,906 | | Carbon 560 ohm ½W ±10% | 2 |
| R907 | | Carbon 82K ohm ¼W ±10% | 1 |
| R903,904 | | Carbon 100K ohm ¼W ±10% | 2 |
| R908 | | Carbon 180K ohm ¼W ±10% | 1 |
| R901,902 | | Carbon 390K ohm ¼W ±10% | 2 |
| **IF, MPX P.C.B. ASSY** | | | |
| 120 | 131 0 4001 41800 | IF MPX P.C.B. assy | 1 |
| | 4 2229 22950 | Variable resistor, separation | 1 |
| | 4 2279 20150 | Low pass filter | 1 |
| | 4 2569 20970 | IF trans, AM 1st | 1 |
| | 4 2569 21000 | IF trans, FM discri | 1 |
| | 4 2569 21020 | IF trans, AM 2nd. | 1 |
| | 4 2569 21030 | IF trans, AM | 1 |
| | 4 2569 21100 | FM IF filter | 2 |
| | 4 2589 20740 | AM OSC coil | 1 |
| | 4 2599 20291 | AM RF coil | 1 |
| | 4 2659 20210 | Multiplex coil 19K Hz | 1 |
| | 4 2659 20220 | Multiplex coil 38 K Hz | 1 |
| | | **(CAPACITORS)** | |
| C202 | | Ceramic 10PF ±0.5pF 50 WV | 1 |
| C255,221 | | Ceramic 15PF ±10% 50 WV | 2 |
| C244 | | Ceramic 20PF ±10% 50 WV | 1 |
| C218 | | Ceramic 250PF ±10% 50 WV | 1 |
| C215,216 | | Ceramic 200PF ±10% 50 WV | 2 |
| C206,207 | | Ceramic 0.001μF ±10% 50 WV | 6 |
| 208,210 | | | |
| 211,212 | | | |
| C232 | | Mylar 0.001μF ±20% 50 WV | 1 |
| C249 | | Mylar 0.0047μF ±20% 50 WV | 1 |
| C238,239 | | Mylar 0.018μF ±5% 50 WV | 2 |
| C236,237 | | Electrolytic 1μF 10V | 2 |
| C227,228 | | Electrolytic 4.7μF 6V | 4 |
| 229,235 | | | |
| C217,233 | | Electrolytic 10μF 10V | 6 |
| 234,240 | | | |
| 241,257 | | | |
| C264 | | Electrolytic 47μF 6V | 1 |
| C220 | | Electrolytic 100μF 16V | 1 |
| C248 | | Styrol 430pF ±10% 50V | 1 |
| C256 | | Styrol 820pF ±10% 50V | 1 |
| C260 | | Styrol 10000PF ±10% 50V | 1 |
| C231 | | Styrol 25000pF ±10% 50V | 1 |
| C230 | | Styrol 100000PF ±10% 50V | 1 |
| C226 | | Alsicon 0.2μF ±20% 10V | 1 |
| C201,203 | | Ceramic 0.01μF +80 −20% 50V | 18 |
| 204,205 | | | |
| 209,213 | | | |
| 214,222 | | | |
| 223,224 | | | |
| 225,242 | | | |
| 243,245 | | | |

| Key. No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **IF, MPX P.C.B. ASSY** | | | |
| 246,262 | | | |
| 263,247, | | | |
| C219,250 | | Ceramic 40000PF +80 −20% 50V | 9 |
| 251,252 | | | |
| 253,254 | | | |
| 258,259 | | | |
| 261 | | | |
| | | **(RESISTORS)** | |
| R207,213, 222, 225,259, | | Carbon 100 ohm ±10% ¼W | 8 |
| 267,275, 280 | | | |
| R219 | | Carbon 180 ohm ±10% ¼W | 1 |
| R229,265, | | Carbon 220 ohm ±10% ¼W | 2 |
| R271 | | Carbon 270 ohm ±10% ¼W | 1 |
| R203,270 | | Carbon 330 ohm ±10% ¼W | 2 |
| R241,261, 279 | | Carbon 470 ohm ±10% ¼W | 3 |
| R206,214 | | Carbon 560 ohm ±10% ¼W | 2 |
| R205,258, 278 | | Carbon 680 ohm ±10% ¼W | 3 |
| R204,210, 211,212, 217,218, 220,221, 242,265, 282 | | Carbon 1K ohm ±10% ¼W | 11 |
| R239,255 | | Carbon 1.2K ohm ±10% ¼W | 2 |
| R254 | | Carbon 1.2K ohm ±10% ¼W | 1 |
| R268, | | Carbon 1.5K ohm ±10% ¼W | 1 |
| R235 | | Carbon 1.8K ohm ±10% ¼W | 1 |
| R228,260 | | Carbon 2.2K ohm ±10% ¼W | 3 |
| 230 | | | |
| R227,244, 245,246, 247,264 | | Carbon 3.3K ohm ±10% ¼W | 6 |
| R240,253 | | Carbon 3.9K ohm ±10% ¼W | 2 |
| R252 | | Carbon 3.9K ohm ±10% ¼W | 1 |
| R243,263, 272 | | Carbon 4.7K ohm ±10% ¼W | 3 |
| R202,231, 233,281 | | Carbon 5.6K ohm ±10% ¼W | 4 |
| R234 | | Carbon 5.6K ohm ±10% ¼W | 1 |
| R209,216, 223,224, 266,276 | | Carbon 6.8K ohm ±10% ¼W | 6 |
| R269,273, 283 | | Carbon 10K ohm ±10% ¼W | 3 |
| R286 | | Carbon 12K ohm ±10% ¼W | 1 |
| R208,215 | | Carbon 15K ohm ±10% ¼W | 2 |
| R201,226, 262 | | Carbon 22K ohm ±10% ¼W | 3 |
| R237,251 | | Carbon 33K ohm ±10% ¼W | 2 |
| R250 | | Carbon 33K ohm ±10% ¼W | 1 |
| R274,277, 284 | | Carbon 56K ohm ±10% ¼W | 3 |
| R236,256 | | Carbon 100K ohm ±10% ¼W | 2 |

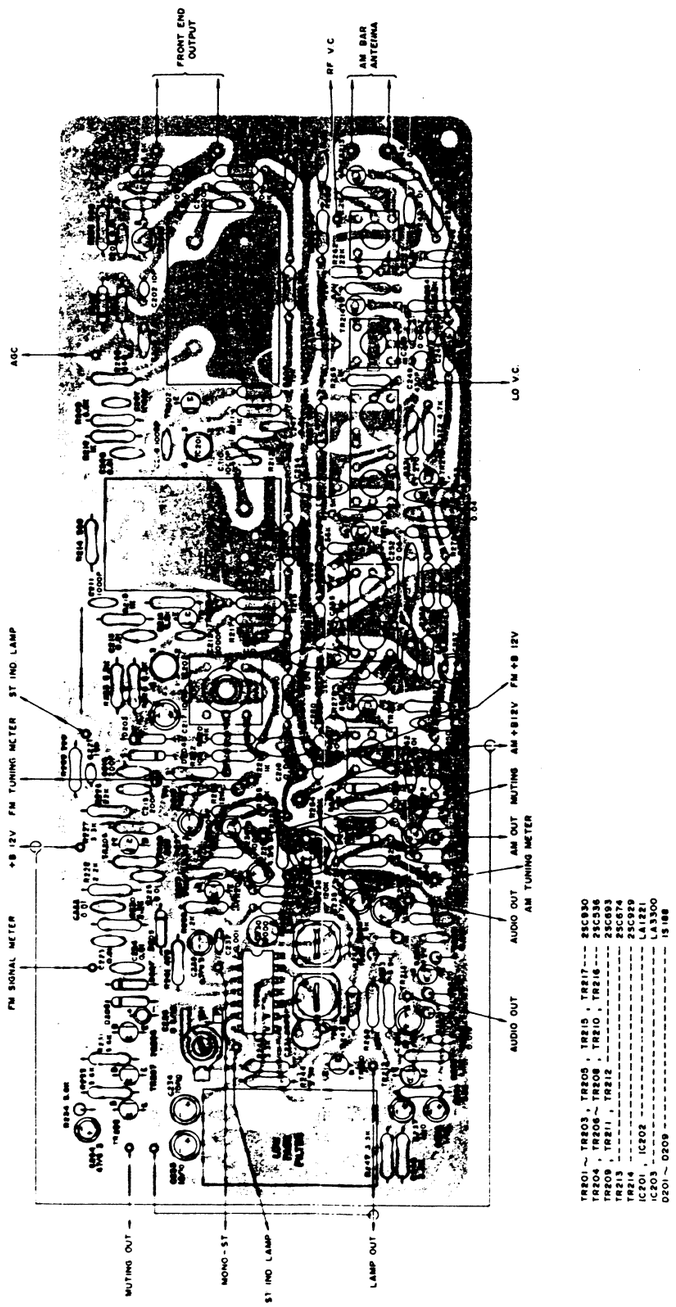
**Notes:** 1. Parts orders must contain Model Number, Part Number and Description.
2. Unless otherwise noted, component parts indicated by parentheses in the column Q'ty are not available.
3. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.



## IF MPX P.C. ASS'Y BOTTOM VIEW



## IF MPX P.C. ASS'Y TOP VIEW





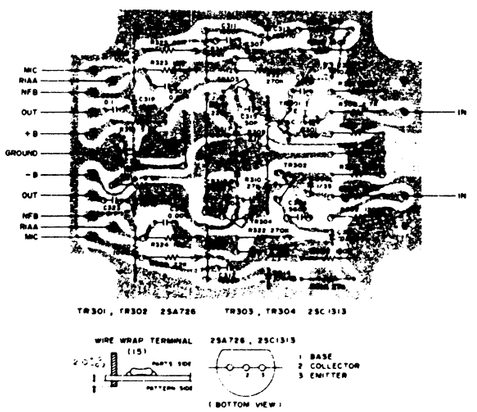

## PARTS LIST

| Key No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **IF, MPX P.C.B. ASSY** | | | |
| R257 | | Carbon 100K ohm ±10% ¼W | 1 |
| R238,249 | | Carbon 120K ohm ±10% ¼W | 2 |
| R248 | | Carbon 120K ohm ±10% ¼W | 1 |
| | | **(SEMICONDUCTORS)** | |
| D201,202, 203,204, 205,206, 207,208, 209 | 202 5 9110 18820 | Diode 1S188 (FM1) | 9 |
| TR213, | 203 5 4500 67440 | Transistor 2SC674 (D) | 1 |
| TR204,206, 207,208, 210,216 | 203 5 5100 53640 | Transistor 2SC536 (D) | 6 |
| TR209,211, 212 | 203 5 5100 69361 | Transistor 2SC693 (FD) | 3 |
| TR214 | 203 5 5500 92950 | Transistor 2SC929(E) | 1 |
| TR201,202, 203,205, 215,217 | 203 5 5500 93040 | Transistor 2SC930(D) | 6 |
| IC201,202 | 206 5 0121 22110 | IC LA-1221 | 2 |
| IC203 | 206 5 0663 30010 | IC LA-3300 | 1 |
| **EQUALIZER P.C.B. ASSY** | | | |
| 122 | 131 0 4001 42100 | Equalizer P.C.B. assy | 1 |
| | | **(CAPACITORS)** | |
| C313,314, 317,318, | | Electrolytic 100µF 10V | 5 |

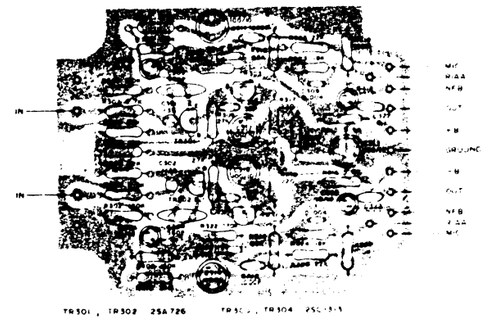
| Key No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **EQUALIZER P.C.B. ASSY** | | | |
| 321 | | | |
| C305,306 | | Electrolytic 10µF 10V | 2 |
| C319,320 | | Electrolytic 10µF 10V | 2 |
| C303,304 | | Ceramic 560pF ±10% 50V | 2 |
| C315,316 | | Ceramic 50pF ±10% 50V | 2 |
| C311,312 | | Mylar 0.001µF ±5% 50V | 2 |
| C307,308 | | Mylar 0.015µF ±5% 50V | 2 |
| C309,310 | | Mylar 0.004µF ±5% 50V | 2 |
| C322,323 | | Mylar 0.1µF ±10% 50V | 2 |
| C301,302 | | Tantal 1µF 35V | 2 |
| | | **(RESISTORS)** | |
| R323,324 | | Carbon 18K ohm ±5% ¼W | 2 |
| R321,322 | | Carbon 270K ohm ±5% ¼W | 2 |
| R328 | | Carbon 10K ohm ±10% ¼W | 1 |
| R325,326 | | Carbon 22K ohm ±10% ¼W | 2 |
| R301,302, | | Carbon 120K ohm ±10% ¼W | 2 |
| R305,306, | | Carbon 150K ohm ±10% ¼W | 2 |
| R319,320 | | Carbon 100K ohm ±10% ¼W | 2 |
| R327 | | Carbon 15K ohm ±10% ¼W | 1 |
| R317,318 | | Carbon 220 ohm ±10% ¼W | 2 |
| R303,304 | | Carbon 2.7K ohm ±10% ¼W | 2 |
| R309,310 | | Carbon 27K ohm ±10% ¼W | 2 |
| R311,312 | | Carbon 270 ohm ±10% ¼W | 2 |
| R315,316 | | Carbon 5.6K ohm ±10% ¼W | 2 |
| R313,314 | | Carbon 68K ohm ±10% ¼W | 2 |
| R307,308 | | Carbon 82K ohm ±10% ¼W | 2 |
| | | **(SEMICONDUCTORS)** | |
| TR301,302 | | Transistor 2SA726 | 2 |
| TR303,304 | | Transistor 2SC1313 | 2 |

NOTES 1 Part orders must contain Model Number Part Number and Description
2 Unless otherwise noted, component parts indicated by parentheses in the column Q'ty are not available
3 Ordering quentity of screws and or resistors must be multiple of 10 pcs

## EQUALIZER P.C. ASS'Y BOTTOM VIEW




## EQUALIZER P.C. ASS'Y TOP VIEW



## PARTS LIST

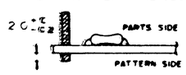
| Key No. | Part No. | Description | Q'ty |
|---|---|---|---|
| PRE AMP P.C.B. ASSY | | | |
| 123 | 131 0 4001 41901 | Pre amp. P.C.B. assy | 1 |
| | 4 2229 23460 | Variable resistor, volume | 1 |
| | 4 2229 23610 | VR 250K-MN, barance | 1 |
| | 4 2229 23620 | VR 50KB-2, tone | 2 |
| | | **(CAPACITORS)** | |
| C415,416 | | Ceramic 80pF ±20% 50V | 2 |
| C407,408 | | Mylar 0.001μF ±5% 50V | 2 |
| C425,426 | | Mylar 0.03μF ±5% 50V | 2 |
| C423,424 | | Mylar 0.047μF ±5% 50V | 2 |
| C409,410, 411,412 | | Mylar 0.082μF ±5% 50V | 4 |
| C403,404 | | Electrolytic 0.47μF 16V | 2 |
| C405,406, 413,414, 419,420, 421,422, 427,428 | | Electrolytic 1μF 16V | 10 |
| C417,418 | | Electrolytic 100μF 10V | 2 |
| C431,432 | | Electrolytic 100μF 25V | 2 |
| C401,402 | | Styrol 100pF ±5% 50V | 2 |
| C429,430 | | Mylar 0.022μF ±5% 50V | 2 |
| | | **(RESISTORS)** | |
| R406 | | Carbon 100 ohm ±10% ¼W | 1 |
| R415,416, 433,434 | | Carbon 1K ohm ±10% ¼W | 4 |
| R443,444 | | Carbon 1.2K ohm ±10% ¼W | 2 |
| R401,402, 447,448 | | Carbon 2.7K ohm ±10% ¼W | 4 |
| R405 | | Carbon 3.3K ohm ±10% ¼W | 1 |
| R413,414 | | Carbon 3.9K ohm ±10% ¼W | 2 |
| R419,420, 421,422, 431,432, 441,442 | | Carbon 5.6K ohm ±10% ¼W | 8 |
| R423,424 | | Carbon 10K ohm ±10% ¼W | 2 |
| R409,410 | | Carbon 12K ohm ±10% ¼W | 2 |
| R425,426, 445,446 | | Carbon 22K ohm ±10% ¼W | 4 |
| R403,404 | | Carbon 27K ohm ±10% ¼W | 2 |
| R429,430, 435,436 | | Carbon 39K ohm ±10% ¼W | 4 |
| R411,412 | | Carbon 56K ohm ±10% ¼W | 2 |
| R417,418, 437,438 | | Carbon 150K ohm ±10% ¼W | 4 |
| R407,408, 427,428 439,440 | | Carbon 220K ohm ±10% ¼W | 6 |
| | | **(SEMICONDUCTORS)** | |
| TR401 - 408 | | Transistor 2SC1313 | 8 |

**Notes:** 1. Parts orders must contain Model Number, Part Number and Description.
2. Unless otherwise noted, component parts indicated by parentheses in the column Q'ty are not available.
3. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

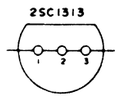
## PRE AMP. P.C. ASS'Y BOTTOM VIEW

TR401~TR408 2SC1313 F or G

WIRE WRAP TERMINAL (26)




2SC1313

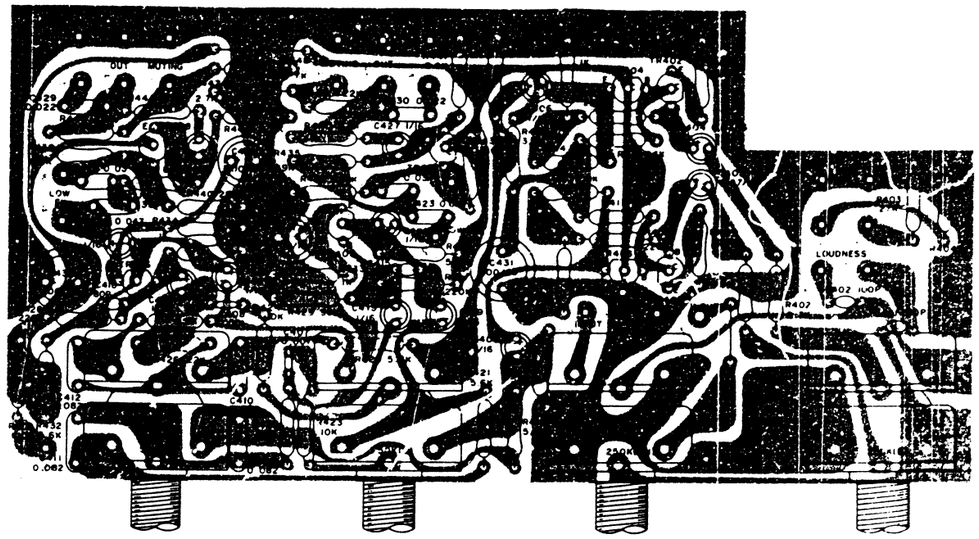



1. BASE
2 COLLECTOR
3. EMITTER

( BOTTOM VIEW )

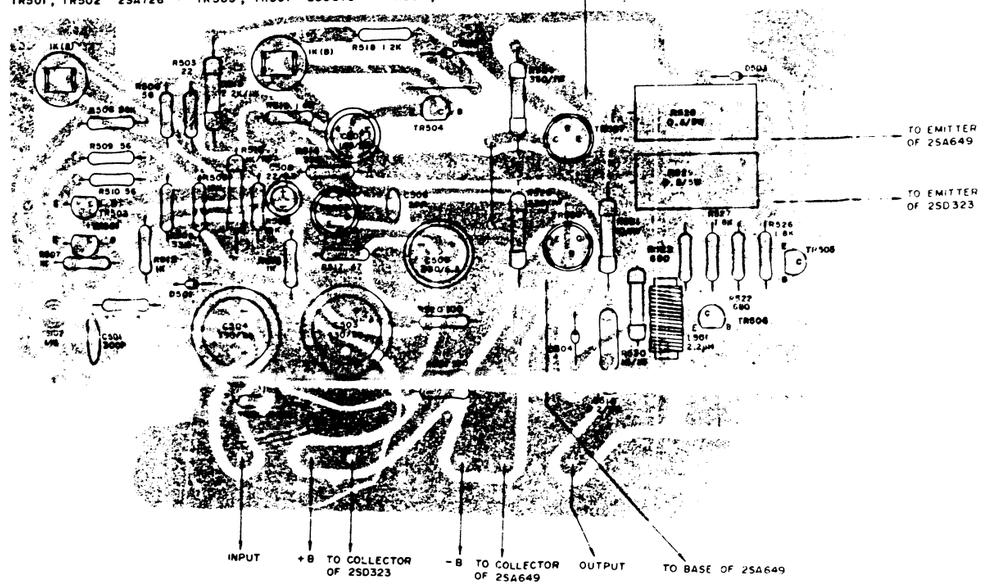


## PRE AMP P.C. ASS'Y TOP VIEW




## MAIN AMP P.C. ASS'Y TOP VIEW

TR501, TR502 2SA726 · TR503, TR507 2SC875 · TR504, TR505 2SC1175 · TR509 2SD323 · TR510 2SA649 · D501~D504 DS-430 · TR506 2SA659 · TR508 2SB532



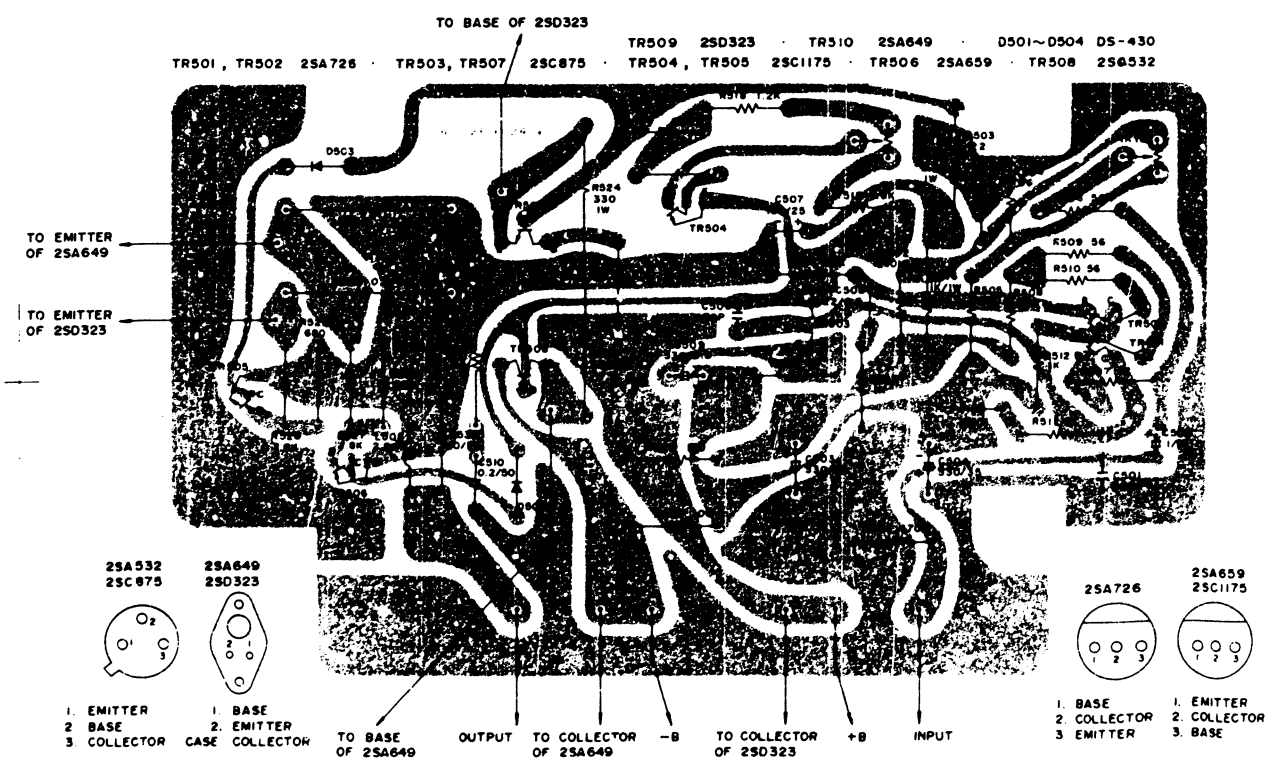
## PARTS LIST

| Key No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **MAIN AMP P.C.B ASSY** | | | |
| 121 | 131 0 4001 33002 | Main AMP P.C.B. assy | 1 |
| | 4 2229 22910 | Semi-fixed VR B-1K ohm | 2 |
| L501 | 4 2539 20160 | Choke coil 2.2μF | 1 |
| | 131 2 3614 13400 | Mount, P.C.B. | 2 |
| | 131 2 3701 12900 | Mount, electric part | 1 |
| | 131 2 3701 13000 | Mount, electric part | 1 |
| | 131 2 6201 19301 | Plate, heat sink | 1 |
| | 4 2359 21500 | Power trans socket | 2 |
| | | **(CAPACITORS)** | |
| C506 | | Ceramic 50pF ±20% 50V | 1 |
| C501 | | Ceramic 300pF ±20% 50V | 1 |
| C510 | | Mylar 0.22μF ±10% 50V | 1 |
| C502 | | Electrolytic 1μF 16V | 1 |
| C508 | | Electrolytic 22μF 6.3V | 1 |
| C507 | | Electrolytic 100μF 25V | 1 |
| C509 | | Electrolytic 330μF 6.3V | 1 |
| C503,504 | | Electrolytic 330μF 35V | 2 |
| | | **(RESISTORS)** | |
| R530,531 | | Carbon 10 ohm ±10% 1W | 2 |
| R503 | | Carbon 22 ohm ±10% ¼W | 1 |
| R517 | | Carbon 47 ohm ±10% ¼W | 1 |
| R504,509, 510 | | Carbon 56 ohm ±10% ¼W | 3 |
| R520,521 | | Carbon 100 ohm ±10% ¼W | 2 |

| Key No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **MAIN AMP P.C.B ASSY** | | | |
| R524,525 | | Carbon 330 ohm ±10% 1W | 2 |
| R522,523 | | Carbon 680 ohm ±10% ¼W | 2 |
| R516 | | Carbon 1K ohm ±10% 1W | 1 |
| R507,511 512,513 | | Carbon 1K ohm ±10% ¼W | 4 |
| R518 | | Carbon 1.2K ohm ±10% ¼W | 1 |
| R519,526, 527 | | Carbon 1.8K ohm ±10% ¼W | 3 |
| R515 | | Carbon 2.2K ohm ±10% 1W | 1 |
| R502,505 | | Carbon 10K ohm ±10% ¼W | 2 |
| R514 | | Carbon 33K ohm ±10% ¼W | 1 |
| R508 | | Carbon 33K ohm ±10% ¼W | 1 |
| R506 | | Carbon 56K ohm ±10% ¼W | 1 |
| R501 | | Carbon 470K ohm ±10% ¼W | 1 |
| R528,529 | | Carbon 0.5 ohm ±10% 5W | 2 |
| | | **(SEMICONDUCTORS)** | |
| TR510 | | Transistor 2SA649 | 1 |
| TR509 | | Transistor 2SD323 | 1 |
| TR501,502 | | Transistor 2SA726 | 2 |
| TR503,507 | 203 5 4600 87550 | Transistor 2SC875 (E) | 2 |
| TR504,505 | 203 5 6701 17540 | Transistor 2SC1175 (E) | 2 |
| TR506 | 203 5 6800 65940 | Transistor 2SA659 (D) | 1 |
| TR508 | 203 5 7100 53250 | Transistor 2SA532 (E) | 1 |
| D501,502, 503,504 | 205 5 9020 43011 | Diode DS430 | 4 |

**Notes:** 1. Parts orders must contain Model Number, Part Number and Description.
2. Unless otherwise noted, component parts indicated by parentheses in the column Q'ty are not available.
3. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

## MAIN AMP P.C. ASS'Y BOTTOM VIEW


TO BASE OF 2SD323
TR509 2SD323 · TR510 2SA649 · D501~D504 DS-430
TR501, TR502 2SA726 · TR503, TR507 2SC875 · TR504, TR505 2SC1175 · TR506 2SA659 · TR508 2SA532
TO EMITTER OF 2SA649
TO EMITTER OF 2SD323
2SA532 2SC875
2SA649 2SD323
1. EMITTER 2. BASE 3. COLLECTOR
1. BASE 2. EMITTER CASE COLLECTOR
TO BASE OF 2SA649
OUTPUT
TO COLLECTOR OF 2SA649
-B
TO COLLECTOR OF 2SD323
+B
INPUT
2SA726
2SA659 2SC1175
1. BASE 2. COLLECTOR 3. EMITTER
1. EMITTER 2. COLLECTOR 3. BASE

## PARTS LIST

| Key No. | Part No. | Description | Q'ty |
|---|---|---|---|
| POWER SUPPLY P.C.B. ASSY | | | |
| 124 | 131 0 4001 40602 | Power supply P.C.B. assy | 1 |
| | | **(CAPACITORS)** | |
| C608 | | Electrolytic 100μF 16V | 1 |
| C609 | | Electrolytic 220μF 16V | 1 |
| C606 | | Electrolytic 1000μF 25V | 1 |
| C601,605 | | Electrolytic 100μF 25V | 2 |
| C602 | | Electrolytic 220μF 25V | 1 |
| C614 | | Ceramic 0.01μF ±10% 50V | 1 |
| C603,604, 607 | | Electrolytic 220μF 35V | 3 |
| C610,611, 612,613 | | Ceramic 0.01μF ±20% 600V | 4 |

| Key No. | Part No. | Description | Q'ty |
|---|---|---|---|
| POWER SUPPLY P.C.B. ASSY | | | |
| | | **(RESISTORS)** | |
| R602,604, 606 | | Carbon 1.5K ohm ±10% ¼W | 3 |
| R603 | | Metal film 100 ohm 1KW | 1 |
| R605 | | Metal film 180 ohm ±10% 1W | 1 |
| R601 | | Metal film 220 ohm ±10% 2W | 1 |
| | | **(SEMICONDUCTORS)** | |
| TR601 | 203 5 6470 51140 | Transistor 2SB511 | 1 |
| TR602,603 | 203 5 8210 32540 | Transistor 2SD325 | 2 |
| D604 | | Diode S3RC-40 | 1 |
| D605 | | Diode S3RC-40R | 1 |
| D601 | | Diode RD-13A | 1 |
| D602 | | Diode RD-24A (M) | 1 |
| D603 | | Diode RD-24A (N) | 1 |

Notes: 1. Parts orders must contain Model Number, Part Number and Description.
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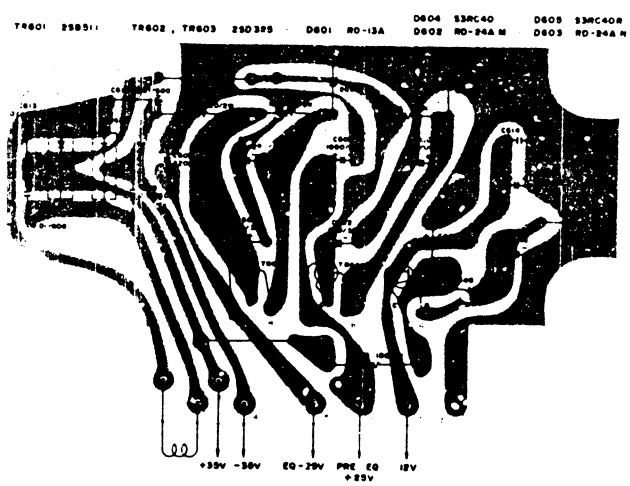
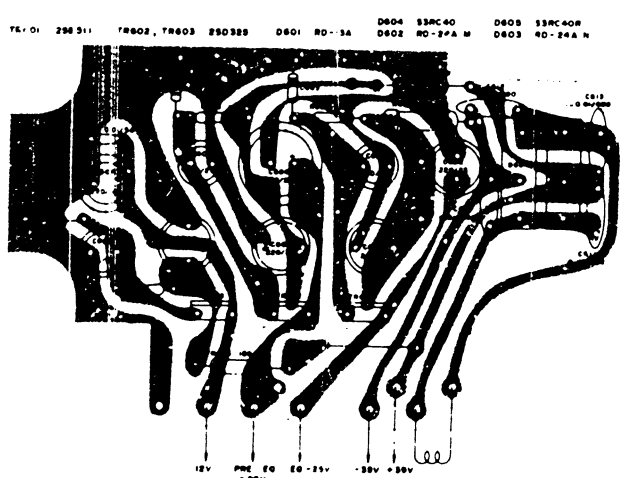
3. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

## POWER SUPPLY P.C. ASS'Y BOTTOM VIEW



## POWER SUPPLY P.C. ASS'Y TOP VIEW



## PARTS LIST

| Key No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **MUTING P.C.B. ASSY** | | | |
| 127 | 131 0 4001 41600 | Muting P.C.B. assy | 1 |
| | | **(CAPACITORS)** | |
| C702,703 | | Electrolytic 1μF 16V | 2 |
| C701 | | Electrolytic 330μF 6.3V | 1 |
| | | **(RESISTORS)** | |
| R704,709 | | Carbon 3.3K ohm ±10% ¼W | 2 |
| R702 | | Carbon 6.8K ohm ±10% ¼W | 1 |
| R703 | | Carbon 22K ohm ±10% ¼W | 1 |
| R708,705 | | Carbon 10K ohm ±10% ¼W | 2 |
| R701 | | Carbon 120K ohm ±10% ¼W | 1 |
| R706,707 | | Carbon 560K ohm ±10% ¼W | 2 |
| | | **(SEMICONDUCTORS)** | |
| TR702,703 | 203 5 5100 53650 | Transistor 2SC536 (F) | 2 |
| TR701 | 203 5 6701 17550 | Transistor 2SC1175 (E) | 1 |

| Key No. | Part No. | Description | Q'ty |
|---|---|---|---|
| **SWITCH P.C.B. ASSY** | | | |
| 126 | 131 0 4001 41701 | Switch P.C.B. assy | 1 |
| | 4 2319 23230 | Switch, push 8 keys | 1 |
| | | **(CAPACITOR)** | |
| C801,802 | | Mylar 0.01μF ±20% 50V | 2 |
| | | **(RESISTOR)** | |
| R801,802 | | Carbon 2.7K ohm ±10% ¼W | 2 |
| **DIAL LAMP P.C.B. ASSY** | | | |
| 125 | 131 0 4001 42000 | Dial lamp P.C.B. assy | 1 |
| | 4 2359 20930 | Fuse holder | 10 |
| | 4 6129 20280 | Pilot lamp | 5 |
| 115 | 4 6129 20360 | Pilot lamp, pointer | 1 |
| R001 | | Resistor, Carbon 6.8 ohm ±10% ¼W | 1 |

**Notes:** 1. Parts orders must contain Model Number, Part Number and Description.
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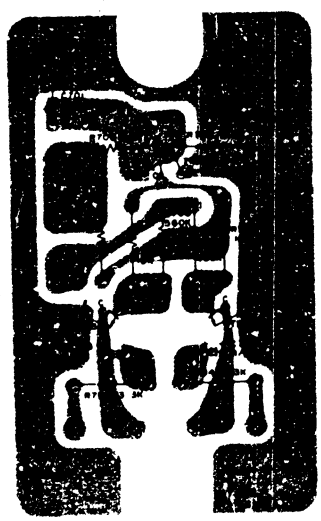
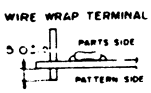
### MUTING P.C. ASS'Y BOTTOM VIEW



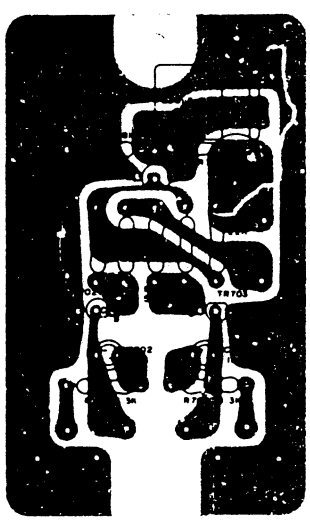
TR701 2SC1175 TR702, TR703 2SC536

WIRE WRAP TERMINAL (10) 2SC536, 2SC1175



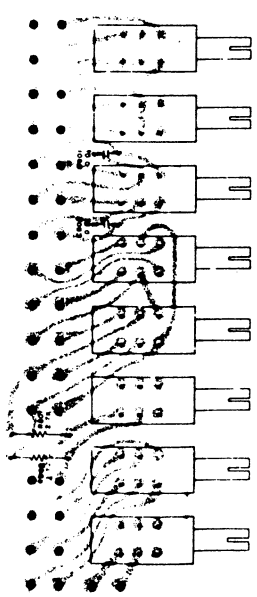
BOTTOM VIEW

### MUTING P.C. ASS'Y TOP VIEW

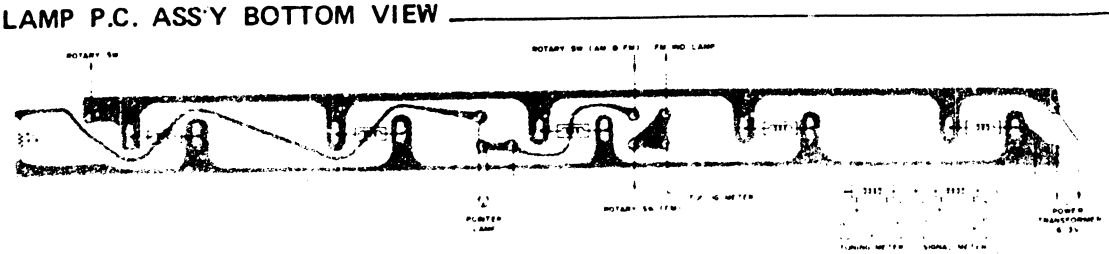


TR701 2SC1175 TR702, TR703 2SC536

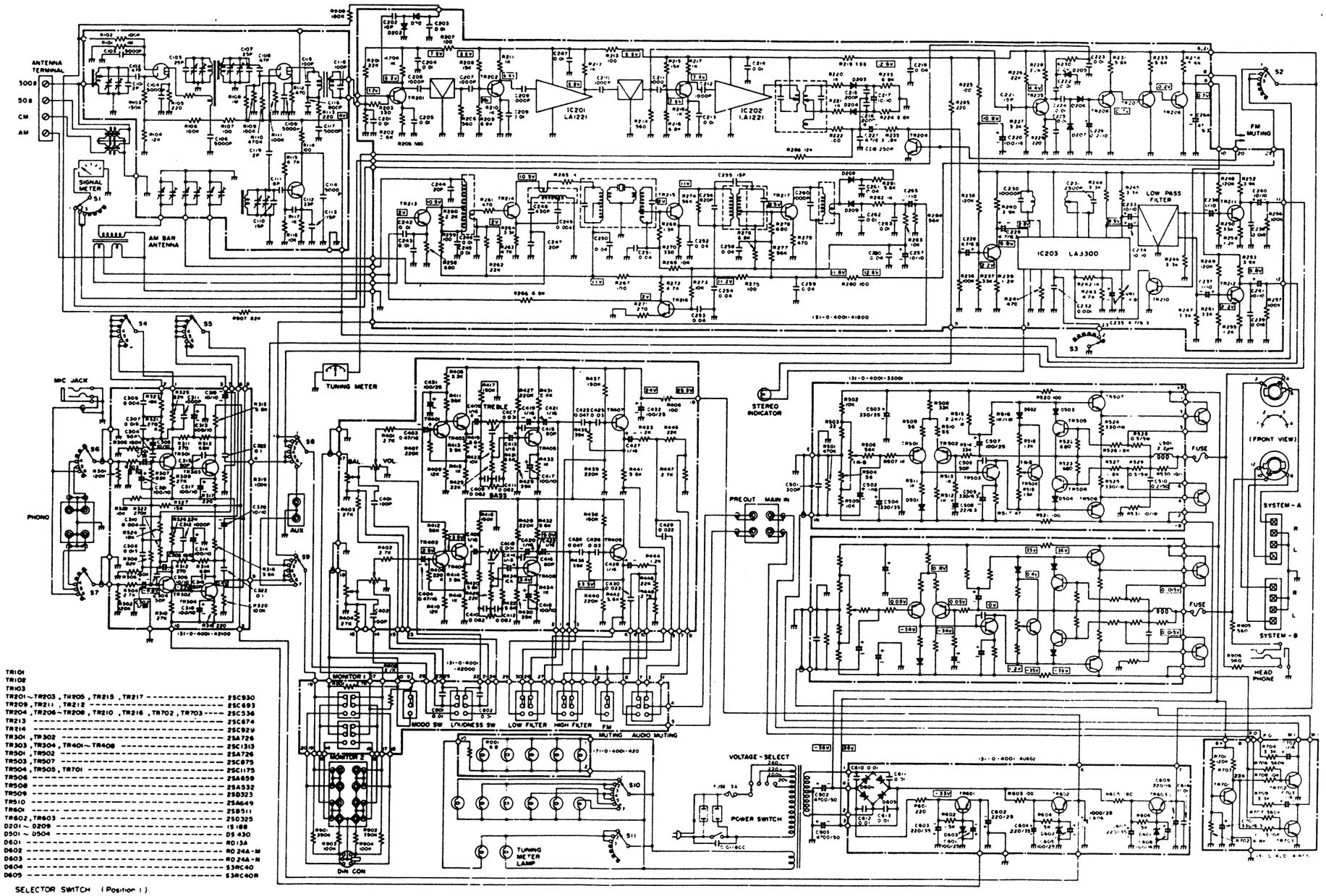
### SWITCH P.C. ASS'Y BOTTOM VIEW



## DIAL LAMP P.C. ASS'Y BOTTOM VIEW



## SCHEMATIC DIAGRAM




| | |
|---|---|
| TR101 | |
| TR102 | |
| TR103 | |
| TR201 ~ TR203 , TR205 , TR215 , TR217 | 2SC930 |
| TR209 , TR211 , TR212 | 2SC693 |
| TR204 , TR206 ~ TR208 , TR210 , TR216 , TR702 , TR703 | 2SC536 |
| TR213 | 2SC674 |
| TR214 | 2SC829 |
| TR301 , TR302 | 2SA726 |
| TR303 , TR304 , TR401 ~ TR408 | 2SC1313 |
| TR501 , TR502 | 2SA726 |
| TR503 , TR507 | 2SC875 |
| TR504 , TR505 , TR701 | 2SC1175 |
| TR506 | 2SA659 |
| TR508 | 2SA532 |
| TR509 | 2SD323 |
| TR510 | 2SA649 |
| TR601 | 2SB511 |
| TR602 , TR603 | 2SD325 |
| D201 ~ D209 | 1S188 |
| D501 ~ D504 | DS 430 |
| D601 | RD13A |
| D602 | RD 24A-M |
| D603 | RD 24A-N |
| D604 | S3RC40 |
| D605 | S3RC40R |

SELECTOR SWITCH (Position)

1 AM
2 FM MONO
3 FM AUTO
4 PHONO 1
5 PHONO 2
6 MIC
7 AUX

S1 SIGNAL METER (AM/FM)
S2 AM/FM POWER SW
S3 FM (MONO/AUTO)
S4,S5 EQ SW (PHONO/MIC)
S6,S7 EQ INPUT SW (PHONO/MIC)
S8,S9 INPUT SELECT SW
S10 SELECT POSITION INDICATOR
S11 METER AND NEEDLE LAMP SW (AM, FM)